position and thereby securing the catheter tube **58** within the catheter connector **20**. The engagement of the insertion member **28** and the center member **24** also compresses the gasket **32**, decreasing the diameter of the channel **34** so that the gasket frictionally engages the catheter tube **58** extending therethrough. Upon removal of the cap **22** from the center member **24**, the lumen of the catheter tube **58** is exposed for connection to another device or for the introduction of substances therein or the removal of fluids therethrough.

Although shown in use as a catheter connector, the invention may also be used to establish and maintain a fluidic connect between other types of tubes.

After being apprised of the devices according to the invention, methods of making them will become readily apparent to those of skill in the art. For instance, a lock washer can be made from a hypoallergenic, firm, resilient plastic material such as acrylonitrile butadiene styrene (ABS), acetyl, nylon, polycarbonate, polyesters, polyethylene, polypropylene, polystyrene, polysulfone, polyurethane, and polyvinyl chloride (PVC). Likewise, a cap, insertion member, and center member may be manufactured from similar materials and by methods which are readily apparent to those of skill in the art. The gasket can be made from a hypoallergenic, collapsible, resilient, low durometer elastomeric material such as a urethane.

Furthermore, the lock washer and connector assembly might otherwise be modified. For instance, in its relaxed state, the lock washer may have a substantially hemispherical appearance. The tube engagement flanges will typically number from three to eight per each lock washer. The connector disclosed herein will work with most types of catheters. The lock washer disclosed herein will work with most Tuohy-Borst catheter connectors. The size of the lock washer and connector will be chosen dependent on the size of the catheter. Typically however, for epidural applications, the lock washer has a diameter of less than about 1 cm and the catheter tube secured thereby has outer diameter of about one mm. As another example, an element other than the described cap, such as a LEUR LOCK™ syringe, may be joined to the connector.

Although the invention has been described with regard to certain preferred embodiments, the scope of the invention is to be defined by the appended claims.

What is claimed is:

1. A lock washer for use in a catheter connector, comprising:

a ring defining a periphery of the lock washer; and

a plurality of tube engagement flanges associated with and extending centrally from said ring, each of said tube engagement flanges having a central tip, central tips of at least selected ones of said plurality of tube engagement flanges defining a tube receptacle for receiving and retaining a tube within said lock washer; and

a collapsible web disposed between adjacent ones of said tube engagement flanges.

2. The lock washer of claim **1**, wherein each of said tube engagement flanges is resilient.

3. The lock washer of claim **1**, wherein adjacent ones of said tube engagement flanges define a compression slot therebetween.

4. The lock washer of claim **1**, wherein said tube engagement flanges are flexible towards the center of a plane in which the periphery of said ring is located.

5. The lock washer of claim **4**, wherein said tube engagement flanges are configured to flex toward the center of said ring to decrease the diameter of said tube receptacle.

6. The lock washer of claim **4**, wherein, following the release of a compressive load from said lock washer periphery, said tube engagement flanges are configured to resiliently flex back to a relaxed state.

7. The lock washer of claim **4**, wherein adjacent ones of said tube engagement flanges define a compression slot therebetween.

8. The lock washer of claim **1**, wherein, upon flexion of said adjacent ones of said tube engagement flanges toward said ring, said web is configured to collapse upon itself.

9. The lock washer of claim **1**, wherein, following a flexion of said tube engagement flanges, said tube engagement flanges return to a relaxed state and said web is configured to re-expand to an original state.

10. The lock washer of claim **4**, wherein, upon flexion of said adjacent ones of said tube engagement flanges toward said ring, said web is configured to collapse upon itself.

11. A lock washer, comprising:

a ring defining a periphery of the lock washer;

a plurality of resilient tube engagement flanges associated with said ring and extending therefrom, each of said tube engagement flanges having a relaxed state and an engaged state, and each including a central tip, said central tips of selected ones of said plurality of tube engagement flanges defining a tube receptacle through the lock washer for receiving a tube; and

a web extending between and adjoining adjacent ones of said tube engagement flanges.

12. The lock washer of claim **11**, wherein adjacent ones of said tube engagement flanges define a compression slot therebetween.

13. The lock washer of claim **11**, wherein each of said tube engagement flanges is proximally compressible with respect to said ring.

14. The lock washer of claim **11**, wherein said tube engagement flanges are configured to flex into said engaged state under a compressive load.

15. The lock washer of claim **11**, wherein said tube engagement flanges are configured to compress toward the center of said ring to decrease the inner diameter of said tube receptacle.

16. The lock washer of claim **11**, wherein, following a release of a compressive load, said tube engagement flanges are configured to flex into said relaxed state.

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